



LESESNE STATE FOREST

What's Going On Here?

This area has been harvested in an effort to control invasive species. Tree-of-Heaven (*Ailanthus altissima*), Oriental bittersweet (*Celastrus orbiculatus*) and multiflora rose (*Rosa multiflora*) had inundated this area and inhibited the growth of native, productive plants and trees. Controlling the invasive species will help us develop a native forest with multiple uses, such as wildlife habitat, recreation, aesthetics, research and forest products.

Forestry activities taking place on this parcel include:

- Pre-harvest control of invasive species through the use of selective herbicides
- Harvest cut removing all stems to aid in the control of invasive species
- Reforestation of the area by planting shortleaf pine – a native species
- Periodic control of invasive species using backpack application of herbicide

If you have further interest or questions about this area, please contact the Virginia Department of Forestry in Nelson County at (434) 263-4232.



Tree-of-Heaven (*Ailanthus altissima*) and Oriental Bittersweet (*Celastrus orbiculatus*)

For more information about Virginia's State Forests, visit www.dof.virginia.gov.



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Alien Invaders



Tree-of-Heaven
(*Ailanthus altissima*)

An invasive plant is one that is not native to an area and causes economic, health-related or environmental harm.

Introducing a new species can upset the natural balance of interactions among plants, animals and non-living parts of the environment. Examples of problems caused by invasive plants include:

- Decline in wildlife species that depend on native plants
 - Loss of economically important species, such as native oaks
 - Introduction of diseases that attack native plants
 - Reduction in biodiversity of plants and the animals that depend on them
- Alteration of hydrology or soil chemistry, in extreme cases

Major invasive species present on this site include:

- Tree-of-Heaven (*Ailanthus altissima*)
- Multiflora rose (*Rosa multiflora*)
- Oriental bittersweet (*Celastrus orbiculatus*)



Oriental bittersweet
(*Celastrus orbiculatus*)



Multiflora rose (*Rosa multiflora*)

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American Chestnut Research



Chinese-American hybrid chestnut

American chestnut (*Castanea dentata*) was once a common tree in many eastern North American forests. The chestnut tree was valued for its nuts, lumber products, tannins and firewood. The chestnut blight fungus (*Endothia parasitica*), first reported in New York in 1904, spread throughout the natural range of chestnut, killing virtually all chestnut trees within 50 years. Because the blight does not kill the roots, many old stumps continue to sprout to this day, sometimes reaching 20 feet and producing a few nuts before being killed by the blight cankers.

Research and development of resistant varieties is occurring at many sites, including Lesesne State Forest. Here, the Virginia Department of Forestry is working to build genetic resistance to blight through a backcrossing program. American chestnut is crossed with Chinese chestnut (*Castanea mollissima*), which is highly resistant to blight. Chinese-American hybrids have an intermediate level of resistance. But after four backcrosses, the trees will be 15/16 American in genetic makeup, with the high resistance of the Chinese species. Success in this program is still years away, but it shows promise for the reintroduction of this majestic forest tree.



Female chestnut bur



Male chestnut catkin



Chestnuts in the bur



Chestnut burs are bagged to protect from airborne pollen

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